

# **Federal and Regional Control Measure Efforts**

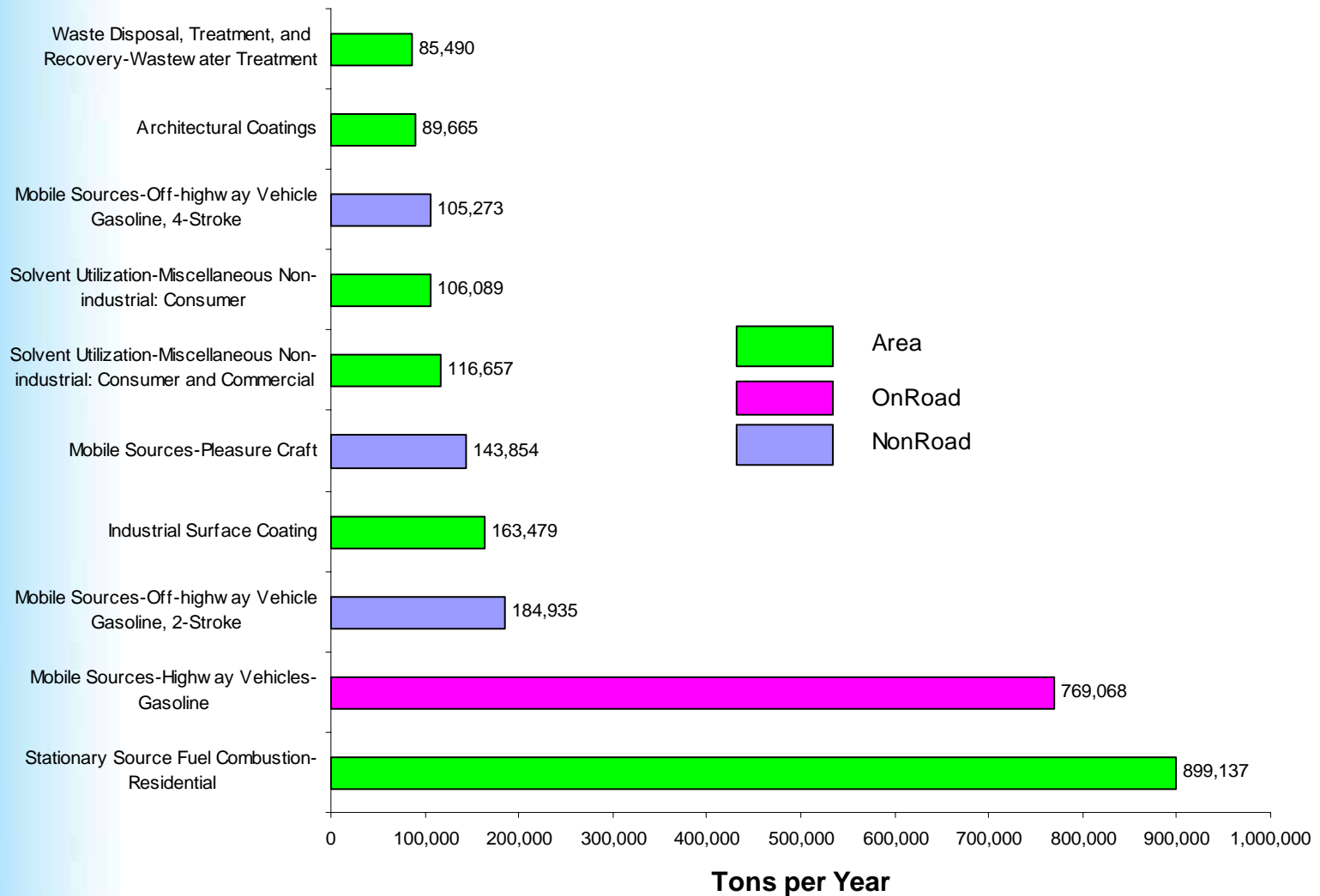


**Tonalee Key, NJDEP  
Division of Air Quality  
May 17, 2006**

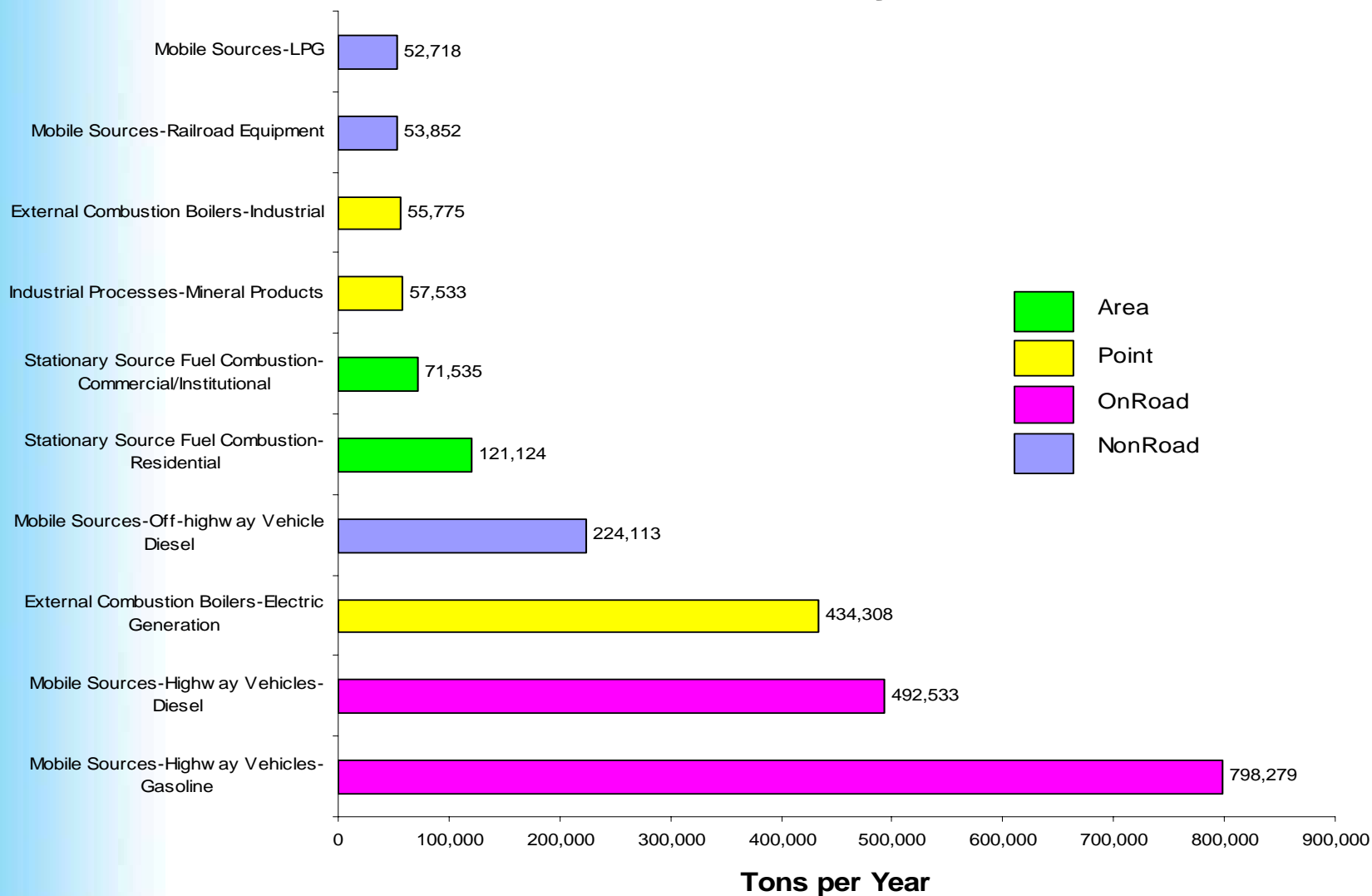
# Overview

- **Reminder... the Regional Inventory**
- **Federal Control Measures**
- **Regional Control Measures**

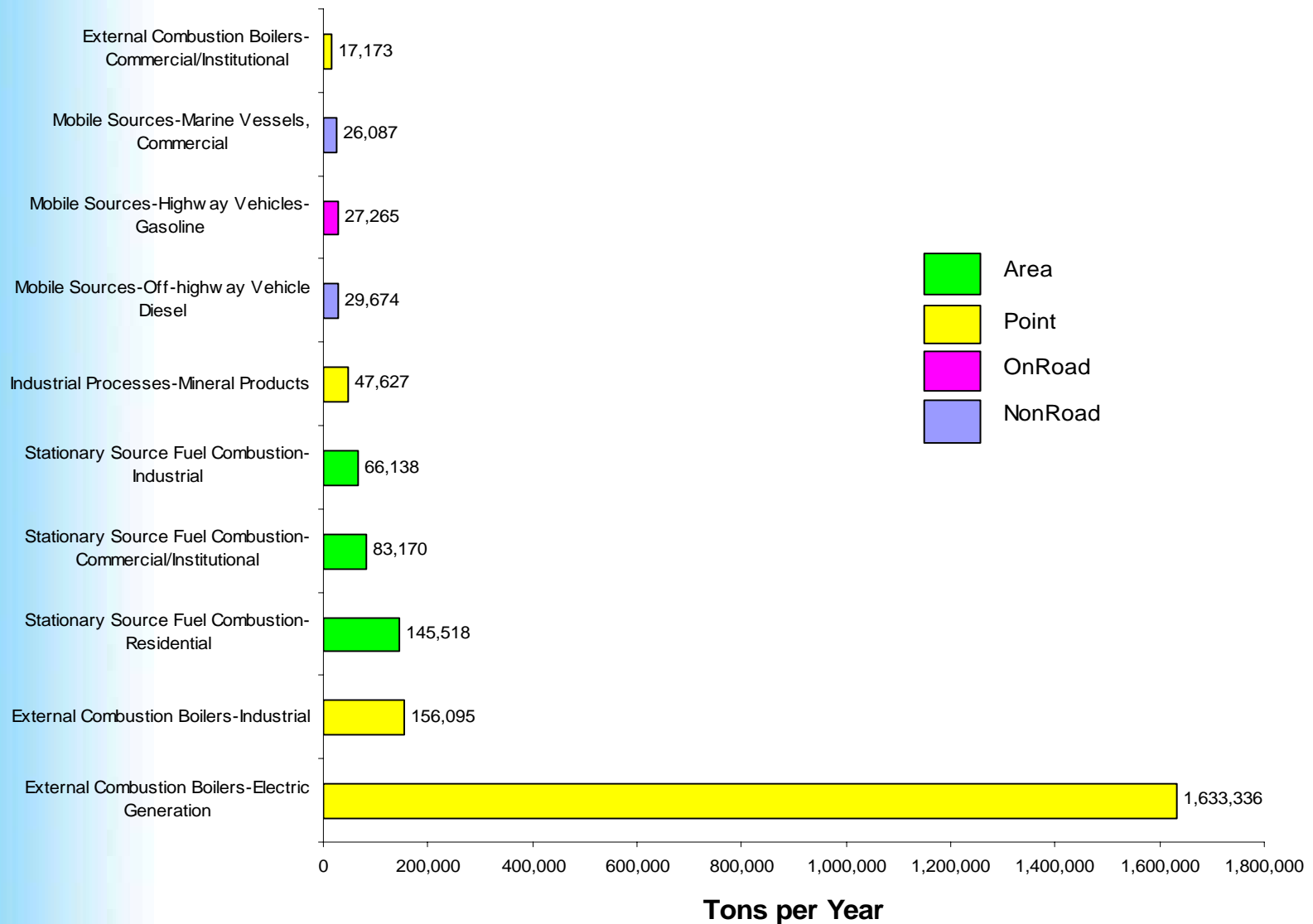
# 2002 MANE-VU Region VOC Emission Inventory Top 10



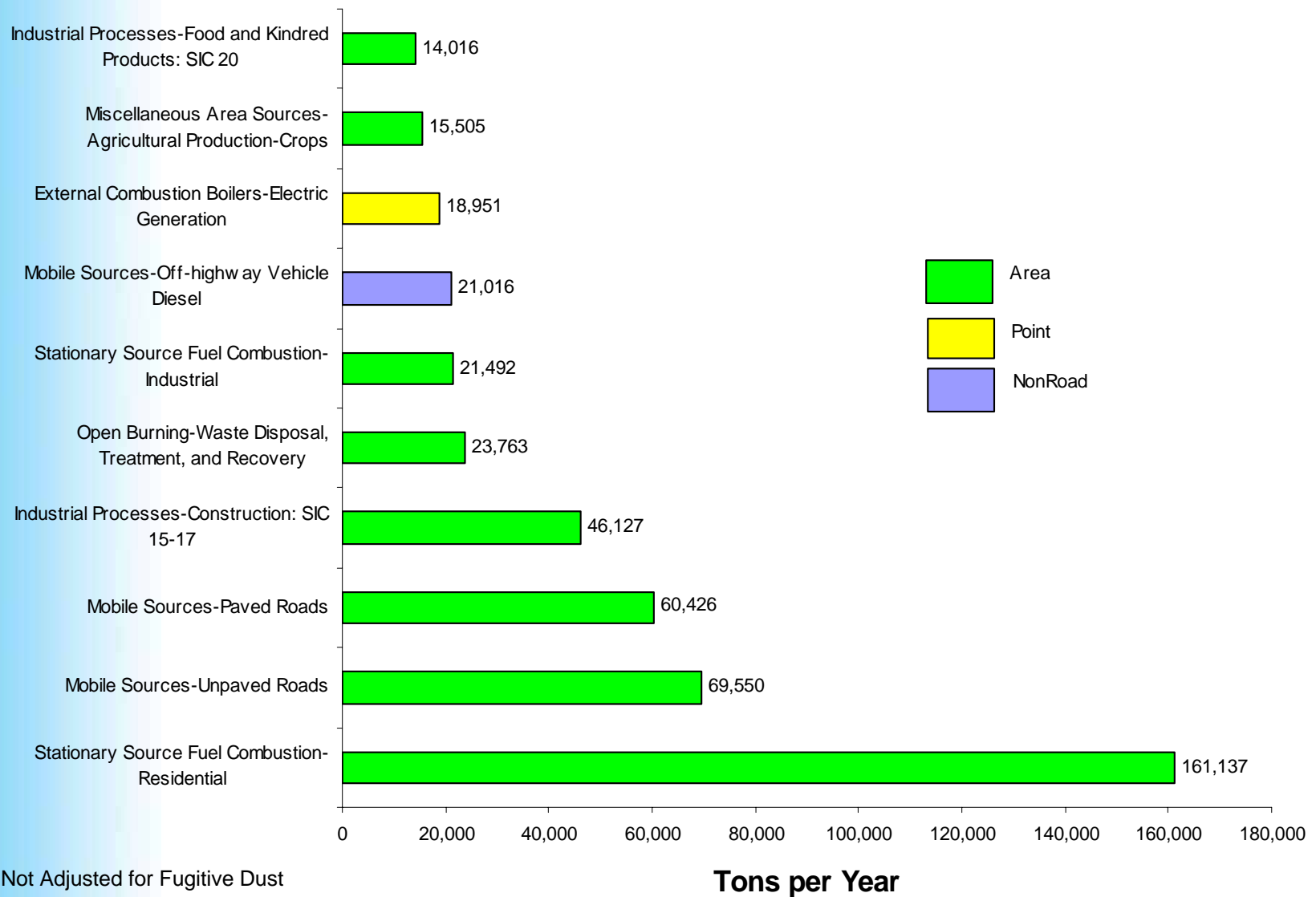
# 2002 MANE-VU Region NO<sub>x</sub> Emission Inventory Top 10



# 2002 MANE-VU Region SO<sub>2</sub> Emission Inventory Top 10



# 2002 MANE-VU Region PM<sub>2.5</sub> Emission Inventory Top 10



# **Federal Measures**

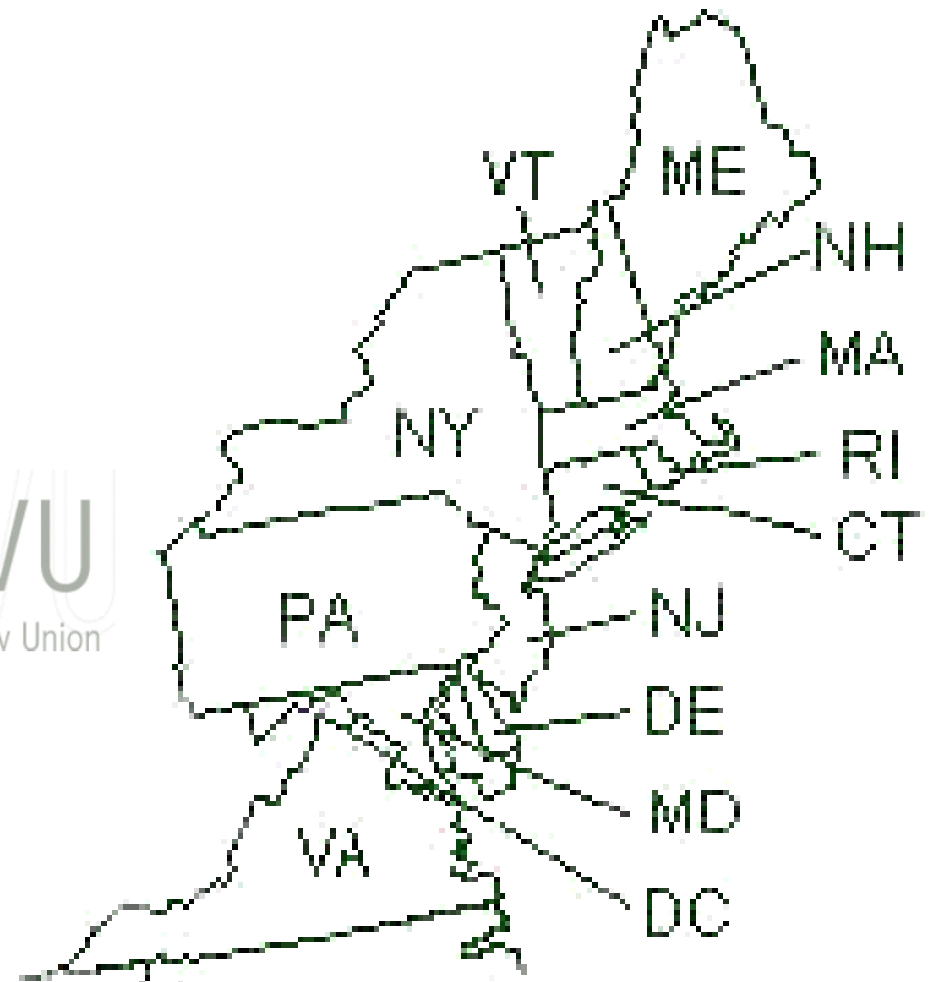
## **Post 2002**

### **On-the-Books / On-the-Way**

- **Onroad Diesel Emission Standards and Ultra Low Sulfur in Fuel**
- **Nonroad Diesel Emission Standards and Ultra Low Sulfur in Fuel**
- **Tier II Onroad Light Duty Vehicle Emission Standards & Low Sulfur Gasoline**
- **Nonroad Spark Ignition Engine Standards (small, large & marine)**
- **Municipal Waste Combustors**
- **Clean Air Interstate Rule (CAIR)**



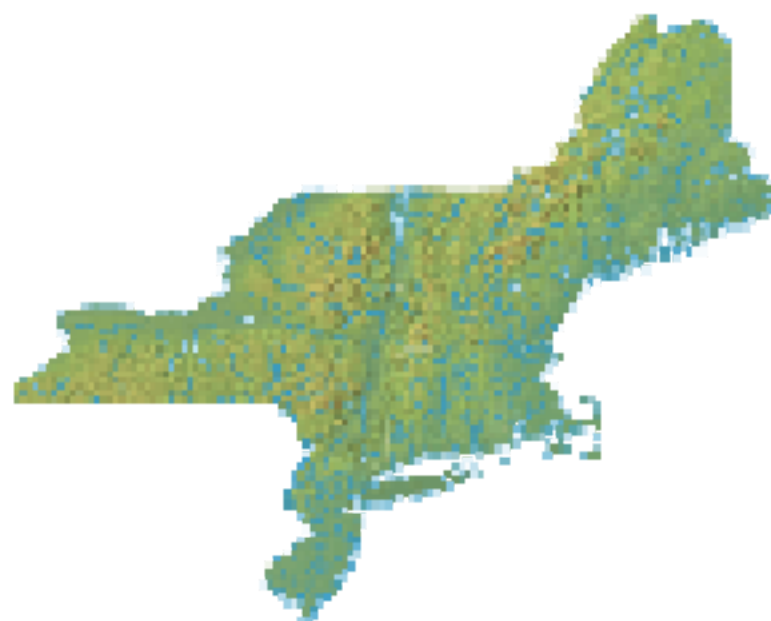
**MANE - VU**  
Mid-Atlantic/Northeast Visibility Union







NESCAUM



**Mid-Atlantic Regional  
Air Management  
Association**

# Regional Measures Under Consideration

## **Diesel Initiatives**

- Chip Reflash
- Diesel Retrofit

## **Home & Restaurants**

- Sulfur Content of Distillate Oil [MANE-VU]

## **Gasoline Cars & Trucks**

- Regional Fuels

## **Stationary Combustion**

- Electrical Generating Units (EGU)
- EGU - High Electrical Demand Day Units
- Industrial, Commercial & Institutional Boilers\*
- Glass Manufacturing\*
- Cement Kilns - none in New Jersey

## **Volatile Organic Compound Processes & Consumer Products**

- Consumer Products
- Portable Fuel Containers
- Architectural and Industrial Maintenance Coatings
- Refineries\* [MARAMA]
- Industrial Adhesives\*
- Asphalt Paving\*
- Asphalt Production\*

# **Diesel Initiative**

## **Chip Reflash**

### **What is chip reflash?**

- Software upgrade on engine control module
- Engine manufacturers under Federal Consent Decree, reflash required at time of engine rebuild, if requested

### **Why is a rule necessary?**

Rate of rebuild has been very slow

### **Measure:**

- Truck engines must be reflashed by a specified date, as opposed to at the time of rebuild
- Trucks must have label affixed as proof of reflash

**Pollutant addressed: NO<sub>x</sub>**

**NAAQS affected: Ozone**

**Reduction: ~63 TPD in Ozone Transport Region**

**Model rule being prepared by NESCAUM**

# **Diesel Initiative**

## **Diesel Retrofit**

**This measure being pursued through two efforts:**

- Northeast Diesel Collaborative
- Mid-Atlantic Diesel Collaborative

**Purpose of the regional collaboratives:**

To leverage fiscal and professional resources to address diesel issues.

**Collaborative priorities:**

- to seek funding for regional projects or projects that are a regional priority (ports, construction & rail)
- to enhance database of information on existing diesel projects
- to develop clearinghouse of health effects data
- to develop better emission inventories

**New Jersey only state with mandatory program**

**Pollutant addressed: PM<sub>2.5</sub>, Air Toxics (diesel)**

**NAAQS affected: PM<sub>2.5</sub>**

# **Homes & Restaurants**

## **Sulfur Content of Distillate Oil**

**Measure:**

- **Decrease sulfur content of distillate oil to 500 ppm by ?**
- **Decrease sulfur content of distillate oil to 15 ppm by ?**

**Pollutants addressed:  $\text{SO}_2$ ,  $\text{PM}_{2.5}$ ,  $\text{NO}_x$ , Hg,  $\text{CO}_2$**

**NAAQS affected:  $\text{PM}_{2.5}$**

**Reductions: ~ 140,000 TPY in Ozone Transport Region**

**Current limits in New Jersey: 2,000-3,000 ppm**

**Model rule being prepared by NESCAUM**

# **Cars & Trucks**

## **Regional Fuels**

**Measure:**

**Use of a single formulation of gasoline throughout the OTR**

**Pollutant addressed: VOC, NO<sub>x</sub>, Air Toxics (e.g. benzene)**

**NAAQS affected: Ozone**

**Reduction: ~140 TPSD\* VOC, ~5 TPSD\* NO<sub>x</sub>**

**New Jersey is required to use one formulation of gasoline**

\* tons per summer day

# **Stationary Combustion**

## **Electrical Generating Units**

### **Measure:**

- Reductions beyond Clean Air Interstate Rule
- Perhaps achieved through changes in retirement ratios
- Include states outside the Ozone Transport Region

**Pollutant addressed: NO<sub>x</sub>, SO<sub>2</sub>**

**NAAQS affected: Ozone & PM<sub>2.5</sub>**

**This measure is still under development by Ozone Transport Commission**

# Stationary Combustion

## EGU - High Electrical Demand Day Units

### **Measure:**

Currently in development phase

### **What we have learned:**

- On high electrical demand days, NO<sub>x</sub> emissions can be 2x or greater than on an average day
- New Jersey - combustion turbines
- New England - boilers using residual oil
- May need other solutions in addition to command & control

**Pollutant addressed: NO<sub>x</sub>, PM<sub>2.5</sub>?**

**NAAQS affected: Ozone**



# **Volatile Organic Compound Processes & Consumer Products Consumer Products**

## **Measure:**

- Adopt California Air Resources Board (CARB) 7/20/05 consumer product amendments
- New limits or revisions for 13 categories
- Does not include
  - 12/31/08 limit for anti static aerosol products
  - 12/31/09 limit for shaving gel

**Pollutant addressed: VOC**

**NAAQS affected: Ozone**

**Reduction: ~11 TPD in Ozone Transport Region**

**Model rule being prepared by Ozone Transport Commission**

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# **Consumer Products**

## **Products to be Regulated**

- **Adhesive removers - floor & wall, gasket & thread locking, general purpose, specialty**
- **Contact adhesives - general & specialty**
- **Anti-static non-aerosol**
- **Electrical & electronic cleaners**
- **Fabric refreshers**
- **Footware & leather care products**
- **Graffiti remover**
- **Hair styling products**
- **Shaving gel**
- **Toilet/urinal care products**
- **Wood cleaner**

# **Volatile Organic Compound Processes & Consumer Products Portable Fuel Containers (PFC)**

## **Measure:**

Adopt CARB 2005 PFC amendments, which:

- Modify existing spout regulations
- Expand definition of PFC
- Combine evaporation and permeation standards

**Pollutant addressed: VOC**

**NAAQS affected: Ozone**

**Reduction: ~30 TPD in Ozone Transport Region,  
when fully implemented**

**Model rule being prepared by Ozone Transport Commission**



# **Volatile Organic Compound Processes & Consumer Products Architectural and Industrial Maintenance Coatings**

## **Measure:**

Adopt CARB 2007 Suggested Control Measure limits,  
as appropriate, when available

**Pollutant addressed: VOC**

**NAAQS affected: Ozone**

# Reductions in the Ozone Transport Region from Regional Measures

Without reductions for the following:  
EGU, EGU-High Electrical Demand Day Units,  
Refineries, Municipal Waste Combustors,  
Diesel Retrofits

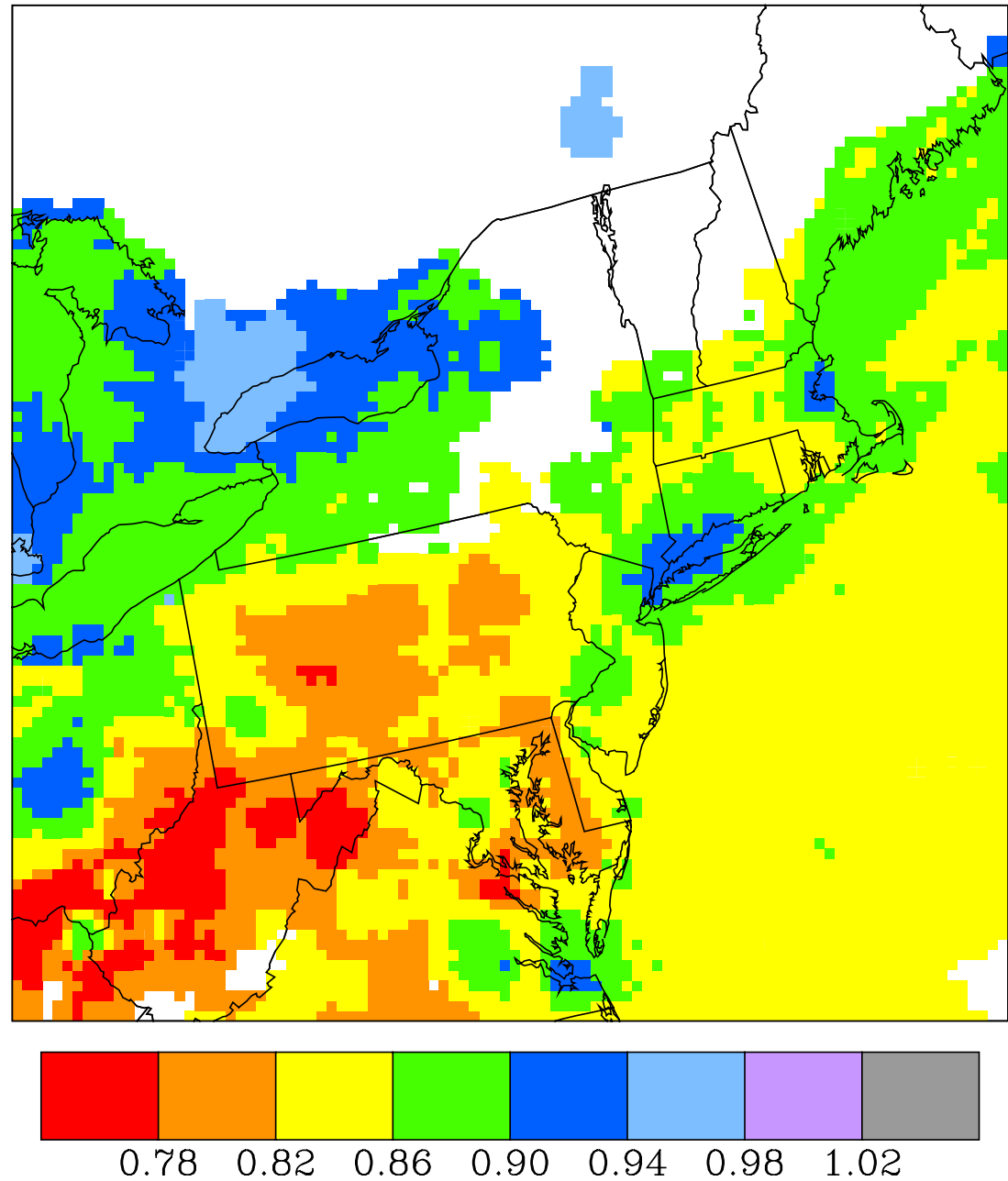
**~ 74,000 TPY NO<sub>x</sub>**

**~ 55,000 TPY VOC**

**~ 300,000 TPY SO<sub>2</sub>**

**~ 5,000 TPY PM<sub>2.5</sub>**

# Sensitivity Modeling RRF 2009 CaseB



# Future Case B

## Reductions in the MANE-VU Region

Key Monitors	Concentration (ppb)	RRF Needed	CaseB RRF Predicted	Future Design Value
Fairfield County (Stratford), CT	98.3	0.86	0.91	89.8
Suffolk County, (Holtsville) NY	97.0	0.87	0.91	88.6
Hunterdon County (Flemington) NJ	95.3	0.89	0.86	82.0
Ocean County, NJ (Colliers Mills)	106.0	0.80	0.86	90.7
Cecil County, (Fair Hill) MD	97.7	0.86	0.80	78.4

**A lower RRF means lower ozone concentrations.**

<http://www.state.nj.us/dep/airworkgroups/2006update.html>

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The NJDEP welcomes public feedback on this and any white papers through June 16, 2006.